



# WAVV 2010

## VSE Connectors User Experience





# What are the Connectors ???

- VSAM Redirector
- Web Services
- VSE Script Server
- Navigator, Health Checker, Map Tools ...
- VSE JAVA Beans class library





# How to get started ???

- Setup VSE partition to run the VSE Connector Server (IESVCSRVR)
- Setup TCP/IP for Connector Server
- Download VSE Connectors Classes and VSAM MapTool from z/VSE website
- Documentation and Executable examples available on the documentation folder  
<C:\Connector Folder\VSEConnectors.html>





# What do JAVA Classes do ???

- An “interface” to VSE to allow you to access VSE functions and resources
- Power
- Librarian
- Console
- Submit Jobs
- Access VSAM files





## Power Example

Use \* as wildcard or blank for all

User  Job Name  Class

Search

18 members matched your search

Name	Job #	Suf	P	D	C	S	Pages	Lines	Start Date/Time	From User	Convert
EM44PT	5892	0	3	H	O		19	1405	Nov 16, 2009 at 11:13:32 AM	MOMMSEN	<input type="text"/>
EM44PT	5903	0	3	H	O		6	391	Nov 16, 2009 at 11:14:01 AM	MOMMSEN	<input type="text"/>
EM44PT	5920	0	3	H	O		6	391	Nov 16, 2009 at 11:14:30 AM	MOMMSEN	<input type="text"/>
EM44PT	5931	0	3	H	O		1	51	Nov 16, 2009 at 11:14:51 AM	MOMMSEN	<input type="text"/>
EM44PT	5941	0	3	H	O		1	62	Nov 16, 2009 at 11:15:08 AM	MOMMSEN	<input type="text"/>
EM44PT	18397	0	3	H	O		1	66	Nov 19, 2009 at 08:26:12 AM	BBROWN	<input type="text"/>
EM44PT	29247	0	3	H	O		1	49	Nov 19, 2009 at 10:17:47 AM	HLIVERMO	<input type="text"/>





## Librarian Example

**Librarian Manager**

Library  Member Name  Type

Member	Type	Created	Last Updated	Bytes
BFMBMF12	PHASE	Nov 16, 2009 at 11:33:48 AM	Nov 16, 2009 at 11:33:48 AM	23,232
BFMBMF14	PHASE	Nov 16, 2009 at 11:34:01 AM	Nov 16, 2009 at 11:34:01 AM	18,824
BFMBMF26	PHASE	Nov 16, 2009 at 11:34:11 AM	Nov 16, 2009 at 11:34:11 AM	39,872
BFMBMF38	PHASE	Nov 16, 2009 at 11:34:21 AM	Nov 16, 2009 at 11:34:21 AM	35,784
BFMBMF40	PHASE	Nov 16, 2009 at 11:34:37 AM	Nov 16, 2009 at 11:34:37 AM	49,472
BFMBMF41	PHASE	Nov 16, 2009 at 11:34:53 AM	Nov 16, 2009 at 11:34:53 AM	18,752
BFMCMF04	PHASE	Nov 16, 2009 at 11:33:16 AM	Nov 16, 2009 at 11:33:16 AM	33,752
BFMCMF06	PHASE	Nov 16, 2009 at 11:33:24 AM	Nov 16, 2009 at 11:33:24 AM	113,336
BFMCMF16	PHASE	Nov 16, 2009 at 08:49:19 AM	Nov 16, 2009 at 08:49:19 AM	21,752
BFMCMF17	PHASE	Nov 16, 2009 at 08:49:43 AM	Nov 16, 2009 at 08:49:43 AM	34,400





# Submit Jobs (Console Messages)

Leave the date blank if you want the messages for the last week.

For a dynamic partition, use an \* instead of the number for all of the partitions.

Search Fields			
VSE System	Date	Job Name	Partition
TEST ▾	11-19-2009	<input type="text"/>	L1

Find Messages

```

L1 0001 1Q47I  L1 PAUSE 48045 FROM LOCAL , TIME= 0:24:18 00:24:18 11/19/2009
L1 0051 // JOB PAUSE (BONAFILI,ECHO=NO) 00:24:18 11/19/2009
      DATE 11/19/2009, CLOCK 00/24/18 00:24:18 11/19/2009
L1 0051 TSS7000I BONAFILI LAST-USED 19 NOV 09 00:24 SYSTEM=VSEC 00:24:18 11/19/2009
      FACILITY=BATCH 00:24:18 11/19/2009
L1 0051 TSS7001I COUNT=32654 MODE=DORM LOCKTIME=NONE NAME=DAVE BONAFILIA 00:24:18 11/19/2009
L1-0051 // PAUSE 00:24:18 11/19/2009
51 00:30:00 11/19/2009 SYS
L1 0051 EOJ PAUSE 00:30:00 11/19/2009
      DATE 11/19/2009, CLOCK 00/30/00, DURATION 00/05/42 00:30:00 11/19/2009
L1 0001 1Q3EI DYNAMIC CLASS 'L' WAITING FOR WORK 00:30:01 11/19/2009
    
```





# Submit Jobs (Compile Programs)

**Compile Programs on VSE**

File Name	<input type="text"/>	<input type="button" value="Browse..."/>	COBOLII	▼
File Name	<input type="text"/>	<input type="button" value="Browse..."/>	COBOLII	▼
File Name	<input type="text"/>	<input type="button" value="Browse..."/>	COBOLII	▼
File Name	<input type="text"/>	<input type="button" value="Browse..."/>	COBOLII	▼
File Name	<input type="text"/>	<input type="button" value="Browse..."/>	COBOLII	▼

Compile finished successfully, return code was 0

PP 5686-068 IBM COBOL FOR VSE/ESA 1.1.0

09/13/1994

DATE 09/22/2009 TIME 09:09:24

JCL OPTION PARAMETERS:

NODECK, LINK, LIST, NOLISTX, SYM, NOTERM, XREF

OPTIONS IN EFFECT:

NOADATA

ADV

APOST

NOAWO

BUFSIZE (4096)





## Submit Jobs (Submit JCL)

**Submit JCL to Mainframe**

JCL File Name

Output File Name

Class

CICS

Catalog

```
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      0, COPY
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      I 40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      320, INCORE
WER22 6A  END SYNCSORT (BGCAIDX), RECORD=      40, INCORE
```





# VSAM Access (Map Tool)

MapToolGui - MCFEADT\_PROD

Fieldname	Length	Offset	Type	Description
AUDT-FILE-NAME	8	0	STRING	20 AUDT-FILE-NAME PIC X(8).
AUDT-DATE-TIME	14	8	STRING	T
AUDT-UPD-TYPE	1	22	STRING	20 AUDT-UPD-TYPE PIC X.
AUDT-VSAM-KEY	95	23	STRING	20 AUDT-VSAM-KEY PIC X(95).
AUDT-USER-ID	8	118	STRING	15 AUDT-USER-ID PIC X(8).
AUDT-TERM-ID	4	126	STRING	15 AUDT-TERM-ID PIC X(4).
AUDT-PROGRAM	8	130	STRING	15 AUDT-PROGRAM PIC X(8).
AUDT-REC-LEN	2	165	SIGNED	15 AUDT-REC-LEN PIC S9(4) COMP.

**Field options**

Append Edit

Insert Delete

**Map options**

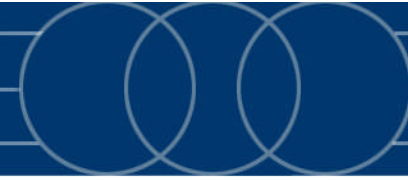
Lookup a field Export

Change map info Insert map

Import new

Exit





# VSAM Access (File Audit Search)

**Choose VSAM Catalog, File, and Map**

Catalog:

File Name:

Map Name:

Audit Search Fields			
From Date	To Date	User ID	Type
<input type="text" value="11-19-2009 01:03:57 PM"/>	<input type="text" value="11-19-2009 01:03:57 PM"/>	<input type="text"/>	<input type="text" value="All"/>

Record Key Search Fields		
Field Name	Condition	Value
TOLL CODE	<input type="text"/>	<input type="text"/>
NETWORK TYPE	<input type="text"/>	<input type="text"/>
EFF DATE	<input type="text"/>	<input type="text"/>





## VSAM Access (File Audit Browse)

There were 8 records that matched your search

UPDATE	DATE/TIME	USER	TOLL CODE	NETWORK TYPE	EFF DATE	SEQ NUM
<a href="#">ADD</a>	11/16/2009 13:52:56	██████████	093272	TEL	20070801	01
<a href="#">ADD</a>	11/16/2009 13:56:38	██████████	093272	TEL	20070801	02
<a href="#">CHANGE</a>	11/16/2009 13:57:06	██████████	093272	TEL	20070801	02
<a href="#">ADD</a>	11/17/2009 15:12:30	██████████	015049	TEL	20091201	01
<a href="#">ADD</a>	11/17/2009 15:12:46	██████████	015050	TEL	20091201	01
<a href="#">ADD</a>	11/17/2009 15:25:45	██████████	783TOLLI	TEL	20091201	01
<a href="#">ADD</a>	11/18/2009 13:41:29	██████████	XXXXXXXXXX	TEL	20090101	01
<a href="#">DELETE</a>	11/18/2009 13:41:41	██████████	XXXXXXXXXX	TEL	20090101	01





# VSAM Access (File Audit Compare)

Audit record for MC.MCFTRAC.PROD in catalog PROD.USER.CATALOG.

This record was changed on 11/11/2009 14:22:55 by the MCSTRAC program.

The record was updated by [REDACTED] using terminal 5142.

Changed record displayed below, changed fields are highlighted in yellow

Off	Len	Key	Type	Field Name	Old Value	New Value
0	8	Yes	Char	TRAC-TOLL-CODE	MBL607	MBL607
8	3	Yes	Char	TRAC-NETWORK-TYPE	TEL	TEL
11	8	Yes	Date	TRAC-EFF-DATE	12/01/2006	12/01/2006
19	2	Yes	Num	TRAC-SEQ-NUM	01	01
21	1	No	Char	TRAC-EFF-TYPE-IND	B	B
22	8	No	Date	TRAC-END-DATE	99/99/9999	12/01/2009
30	1	No	Char	TRAC-END-TYPE-IND	X	B
31	2	No	Char	TRAC-PLAN-TYPE	02	02
33	2	No	Char	TRAC-RATE-TYPE	01	01





## Web Services (CICS2WS Tool)

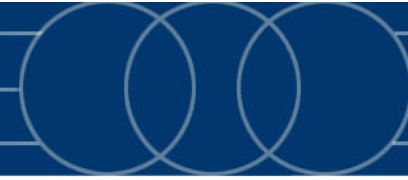
**Input/Output Parameter Mapping**

Content	Instance	Type	Length	Offset
COMMAREA Variables				
CT PARM	Group		0	0
ST CALL_TYPE	Field	STRING	2	0
ST CICS_PART	Field	STRING	2	2
ST TSQ_NAME	Field	STRING	16	4
ST NUM_ITEMS	Field	ZONED	5	20
ST TOT_LEN	Field	ZONED	8	25
ST LOCATION	Field	STRING	9	33

Content	Instance	Type	COMMAREA Name
Mapped Variables			
Input Parameter			
ST CALL_TYPE	Field	STRING	CALL_TYPE
ST CICS_PART	Field	STRING	CICS_PART
ST TSQ_NAME	Field	STRING	TSQ_NAME
Output Parameter			
ST TSQ_NAME	Field	STRING	TSQ_NAME
ST NUM_ITEMS	Field	ZONED	NUM_ITEMS
ST TOT_LEN	Field	ZONED	TOT_LEN
ST LOCATION	Field	STRING	LOCATION





# Web Services (Example)

CICS Temp Storage Queue Search

TSQ Name

CICS Partition

5 Temp Storage Queues matched your search

TSQ Name	# Items	Location	Min Len	Max Len	Tot Len
<a href="#">BEHRENDSSSECUPROF</a>	1	Main	1280	1280	1280
<a href="#">BEHRENDSTRACREC</a>	1	Main	384	384	384
<a href="#">BEHRENDSTRACTEMP</a>	1	Main	384	384	384
<a href="#">BEHRENDSTRACMREC</a>	1	Main	320	320	320
<a href="#">BEHRENDSTRACMTEMP</a>	1	Main	320	320	320



# VSAM Redirector

- Allows you to redirect access to a VSAM file to a database or other file system
- Can be used for read and write access to database
- Data can reside on both the VSAM file and the database or just the database itself
- No changes needed to programs
- “Opies” can initiate downloads of data



## What's Needed ??

- Setup VSE partition to run the VSE Connector Server
- Download VSAM Redirector Server from z/VSE website and install on server
- Setup IESRD CFG table for Redirection
- Run MapConfigGui program to setup mapping of data and database tables



# VSE Script Server

- Provides access to VSE resources using scripts without having to write Java programs
- Scripts written in a simple script language using *if*, *while*, *for* to control the program flow
- Access VSAM, Console, and Power
- Can be invoked by any kind of programs like Java, Excel, Lotus, and even VSE Batch job





## Notes

- z/VSE e-business Connectors, User's Guide  
– SC33-8310-02
- Eclipse IDE for coding and testing of JAVA  
<http://www.eclipse.org/>
- soapUI program to help test Web Services  
<http://www.eviware.com/>





# Questions ???

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